

**ARGUMENTS/REMARKS****I. PRELIMINARY REMARKS**

Applicant thanks the Examiner for the Office Action of July 10, 2003.

Claims 1 - 12 and 14 - 19 are pending in the application. All claims are rejected based on the cited art. The principle reference relied upon in making all of the rejections is Reber. The rejection is non-final.

By this amendment, new claims 20-23 are presented. New claims 20-23 are fully supported by the specification and present no new subject matter.

Reconsideration of the application is respectfully requested in view of the remarks and arguments contained herein.

**II. THE RULE 131 DECLARATION PREVIOUSLY SUBMITTED OVERCOMES THE CITED PRIOR ART**

The Examiner has relied upon Reber (U.S. Patent No. 6,393,070, having a priority date of August 12, 1997) as the primary reference. In Applicant's prior amendment and response dated March 7, 2003 and supplemental response dated May 1, 2003, Applicant submitted a Declaration under Rule 131 of the inventor Ronald Hickling including documentation showing conception of the invention at least as early as July 10, 1995. (See previously submitted Declaration of Ronald Hickling, Exhibit 1, cover page).

The Examiner's position is that the Declaration and accompanying Exhibits are insufficient to establish invention prior to the effective date of the Reber reference. The Examiner concedes that Exhibit 2 [sic – Exhibit 1] discloses that the demodulator uses a "'chopper' which effectively multiplies the input by a '+1, -1, +1' . . . sequence that is equivalent to negating the gain polarity of the input amplifier on every half [sic – half cycle] of the clock." (Office Action at page 3). The Examiner, however, contends that the declaration and accompanying exhibits suffer various shortcomings, including that:

- "in Fig. 2.3.1 of the Exhibit 2 [sic – Exhibit 1], the digital I-Q modulator comprises a GaAs integrated circuit and a silicon CMOS integrated circuit."
- "Exhibit 2 [sic – Exhibit 1] does not fully describe the operation of the block elements of FIG. 2.3.1. . . . Exhibit 2 [sic – Exhibit 1] does not teach which circuitry generates the polarity of the commutator signal. In other words, Exhibit 2 does not

teach or show the principle invention as shown in Fig. 4 and the claimed subject matter of claims 1-12 and 14-19 in the instant application."

In sum, the Examiner contends that the Exhibits to the Declaration do not show all of the details disclosed and claimed in the application.

In response, Applicant respectfully submits that the Examiner is applying an incorrect and overly harsh standard for judging whether a Declaration under Rule 131 supports an applicant's claim to prior invention. The correct standard is defined by MPEP 715.02. That section provides:

The **37 CFR 1.131** affidavit or declaration must establish possession of either the whole invention claimed or something falling within the claim (such as a species of a claimed genus), in the sense that the claim as a whole reads on it. . . . Note, however, where the differences between the claimed invention and the disclosure of the reference(s) are so small as to render the claims obvious over the reference(s), an affidavit or declaration under 37 CFR 1.131 is required to show no more than the reference shows. *In re Stryker*, 435 F.2d 1340, 168 USPQ 372 (CCPA 1971). In other words, where the examiner, in rejecting a claim under **35 U.S.C. 103**, has treated a claim limitation as being an obvious feature or modification of the disclosure of the reference(s) relied upon, without citation of a reference which teaches such feature or modification, a **37 CFR 1.131** affidavit or declaration may be sufficient to overcome the rejection even if it does not show such feature or modification.

Further, a **37 CFR 1.131** affidavit is not insufficient merely because it does not show the identical disclosure of the reference(s) or the identical subject matter involved in the activity relied upon. If the affidavit contains facts showing a completion of the invention commensurate with the extent of the invention as claimed is shown in the reference or activity, the affidavit or declaration is sufficient, whether or not it is a showing of the identical disclosure of the reference or the identical subject matter involved in the activity. See *In re Wakefield*, 422 F.2d 897, 164 USPQ 636 (CCPA 1970).

Even if applicant's 37 CFR 1.131 affidavit is not fully commensurate with the rejected claim, the applicant can still overcome the rejection by showing that the differences between the claimed invention and the showing under 37 CFR 1.131 would have been obvious to one of ordinary skill in the art, in view of applicant's 37 CFR 1.131 evidence, prior to the effective date of the reference(s) or the activity. Such evidence is sufficient because applicant's possession of what is shown carries with it possession of variations and adaptations which would have been obvious, at the same time, to one of ordinary skill in the art. However, the affidavit or declaration showing must still establish possession of the invention (i.e., the basic inventive concept) and not just of what one reference (in a combination of applied references) happens to show, if that reference does not itself teach the basic inventive concept. *In re Spiller*, 500 F.2d 1170, 182 USPQ

614 (CCPA 1974) (. . . Affidavit was sufficient in view of prior art reference . . .  
The affidavit established possession of the basic invention, i.e., use of  
electrostatic forces to adhere starch to wet paper.).

a. SWEARING BEHIND ONE OF A PLURALITY OF COMBINED  
REFERENCES

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Where a claim has been rejected under 35 U.S.C. 103 based on Reference A in view of Reference B, with the effective date of secondary Reference B being earlier than that of Reference A, the applicant can rely on the teachings of Reference B to show that the differences between what is shown in his or her 37 CFR 1.131 affidavit or declaration and the claimed invention would have been obvious to one of ordinary skill in the art prior to the date of Reference A. However, the 37 CFR 1.131 affidavit or declaration must still establish possession of the claimed invention, not just what Reference A shows, if Reference A does not teach the basic inventive concept.

MPEP 715.20 (emphasis added).

The correct standard therefore as promulgated by the MPEP is that where a primary reference is relied upon by the Examiner to show a particular basic inventive concept, and the Examiner contends that the other elements recited in the claim would be obvious additions to or variations on the primary reference, it is sufficient for the Rule 131 declaration to show possession of that same basic inventive concept which the Examiner contends is shown in the primary reference. The Rule 131 declaration does not need to show the exact circuitry disclosed and claimed in the application, or disclosed in the cited reference.

That is the situation presented in the present case. The basic inventive concept claimed is not the particular logic family of integrated circuit used to build the I-Q modulator, or the particular circuitry that generates the polarity of the commutator signal. The Rule 131 declaration therefore does not need to show those features as suggested by the Examiner in the Office Action. Rather, a basic inventive concept in the application is the multiplication of the incoming signal by a +1, -1, +1 sequence to downconvert the signal to a lower frequency. This is a basic inventive concept as discussed in the application itself as the inventor's new mathematical paradigm for downconversion. (See, e.g., page 10, lines 21-25). The Examiner has relied upon the Reber reference to show this inventive concept, in that Reber shows the incoming waveform being alternately inverted on half-cycles of a clock (See Reber Fig. 2, and Office Action at pp. 4-5). This inventive concept is clearly disclosed in Exhibit 1 of the Rule

131 Declaration. (See, e.g., Fig. 2.3.1 and page 8, last paragraph). Applicant further notes that Exhibit 1 describes the circuitry as a sigma-delta modulator (e.g, Page 7, first paragraph), reflecting the fact that the remainder of the circuitry after the "chopper" mixer or equivalently the inverting circuitry constitutes a delta-sigma circuit. (See, e.g., claim 1).

In sum, the Rule 131 declaration shows the basic inventive concept of inverting an incoming waveform an alternate half-cycles as the core downconversion technique, which is all that the Rule 131 declaration needs to show in this case to overcome the Reber reference.

### **III. THE CLAIMS PATENTABLY DISTINGUISH OVER THE CITED ART**

Even if Reber and De Vries were to be considered as prior art, the invention as claimed would still be patentable over the combination of those two references. The Reber circuit is much different and operates in a much different way than the circuit of the present invention, as explained in detail in Applicant's response to the prior Office Action.

Additionally, it would not be obvious to combine the Reber circuit with the electric power measuring device for utility electric meters as disclosed in De Vries, for reasons sufficiently stated in Applicant's response to the prior Office Action.

### **IV. NEW CLAIMS 20-23 ARE FULLY SUPPORTED BY THE SPECIFICATION**

Newly presented claims 20-23 are fully supported in the specification, present no new subject matter, and would not require a new search. Claims 20-23 embody broadly the basic inventive concept of direct downconversion by multiplying by +1 and -1 on alternating clock cycles.

Claim 20 recites, "A method of receiving a wireless transmission comprising: multiplying an incoming waveform by +1 and -1 on alternating half cycles of a conversion clock to produce a commutated waveform, thereby translating the incoming waveform downward in frequency." Claim 20 is supported in the specification at, e.g., page 10, lines 21-25.

Claim 21 adds that, "the incoming waveform comprises a baseband frequency signal modulated at a carrier frequency, and the conversion clock has a frequency of approximately the carrier frequency; whereby the multiplying step produces a signal of approximately the baseband frequency." Claim 21 is supported in the specification at, e.g., page 10, lines 5-10.

Claim 22 adds the step of, "converting the commutated waveform to a series of representative digital values using a delta-sigma modulator clocked at a frequency equal to the

conversion clock." Claim 22 recites some of the same subject matter which has always been recited in originally presented claim 1.

24.Claim 23 adds that, "the incoming waveform has a frequency of greater than 1 MHz, and the multiplying and converting steps downconvert the incoming signal directly to a baseband frequency without needing to first downconverting the incoming signal to an intermediate frequency." Claim 23 is supported in the specification at, e.g., page 8, line 2 (referring to a incoming waveform having a center frequency of 2 GHz), page 8, lines 9-11 (direct downconversion) and page 10, lines 5-10 (same).

### CONCLUDING REMARKS

In view of the above arguments and remarks, Applicant respectfully requests that all of the claim rejections be withdrawn and the application be allowed to proceed to issuance.

If for any reason the Examiner feels that the claims are other than in condition for immediate allowance the Examiner is respectfully requested to call applicant's undersigned representative at (310) 242-2735 to discuss any steps necessary to place the application in condition for allowance.

The Commissioner is hereby authorized to charge any additional filing fees under 37 C.F.R. § 1.16, or application processing fees under 37 C.F.R. § 1.17, which may be required now or during the pendency of this application, or credit any overpayment to Account No. 16-2230. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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